

2018 End-to-End Census Test

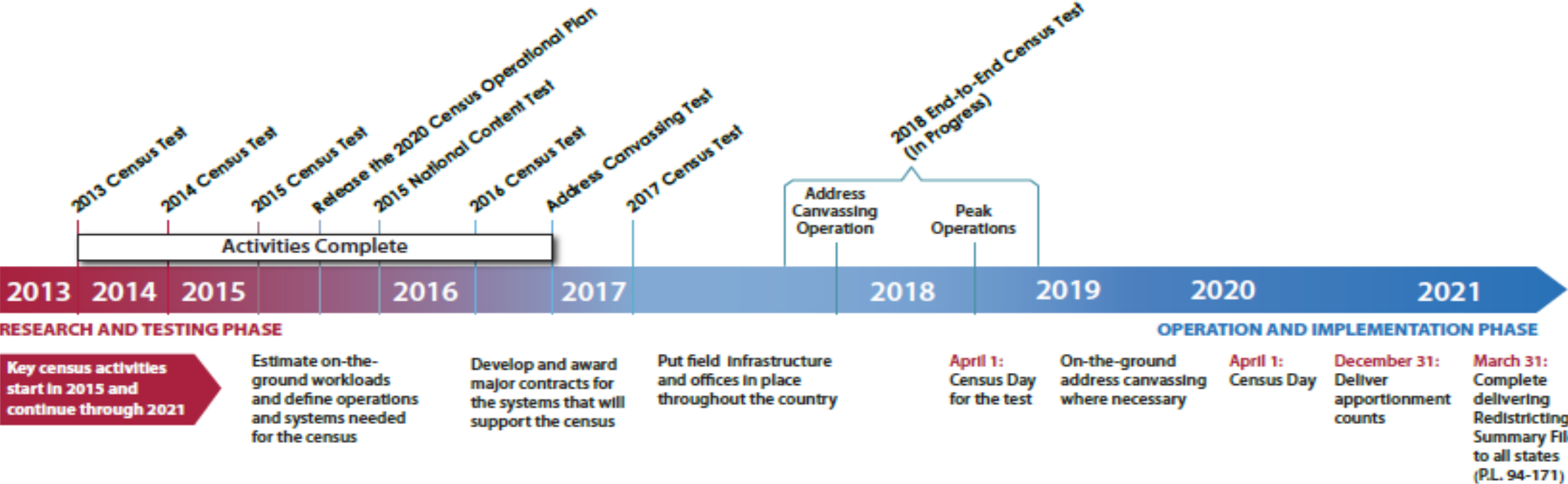
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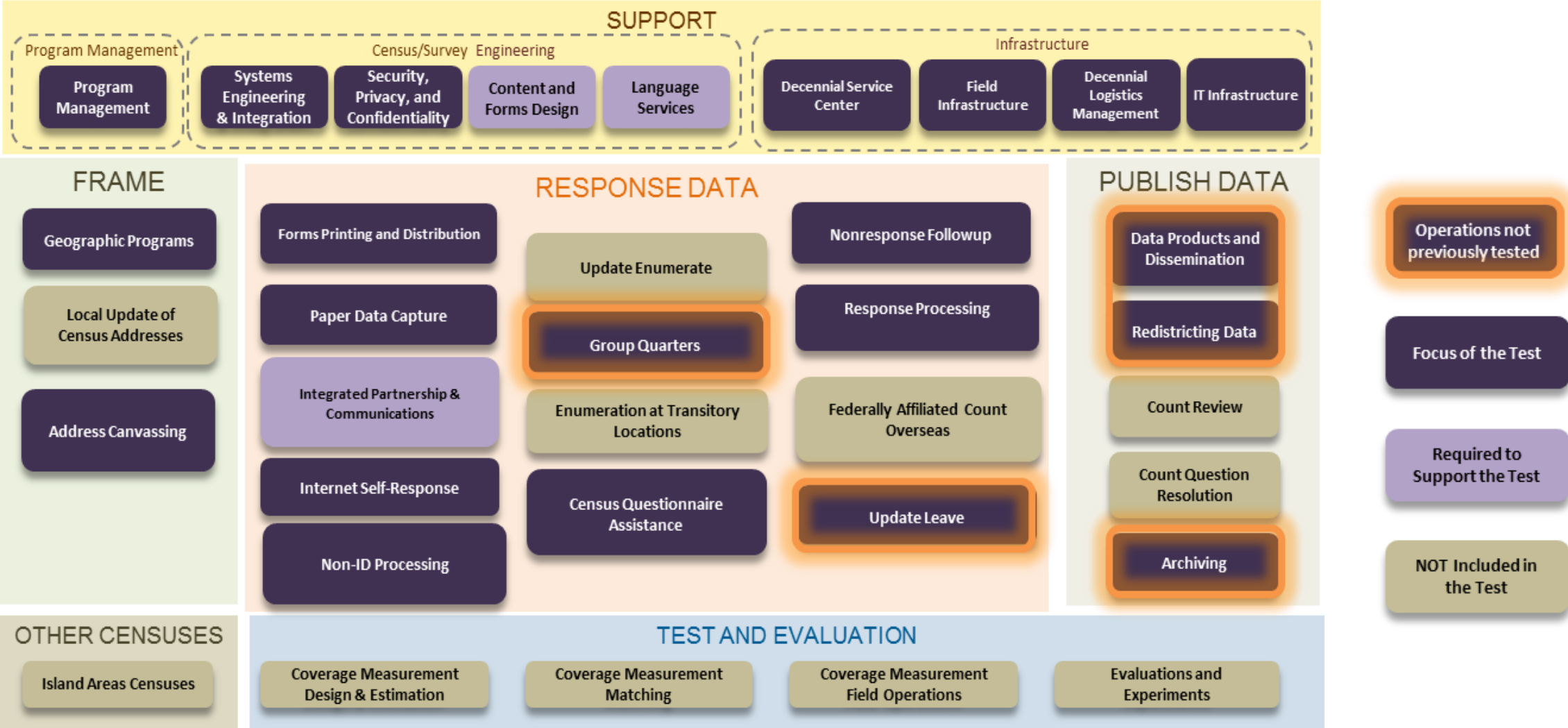
The 2020 Census

Where Are We Today?



2018 End-to-End Census Test

Operational Scope



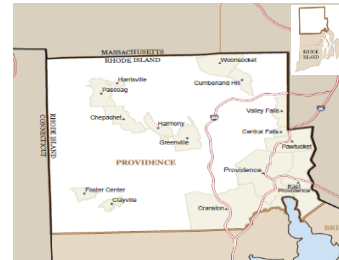
2018 End-to-End Census Test

Overview

Address Canvassing

- Exercise final listing/mapping capabilities in the field
- Conduct in-field listing quality control

Providence County, RI



Pierce County, WA



Bluefield-Beckley-Oak Hill, WV



Peak Operations

- Validate that the operations in scope for the 2018 End-to-End Census Test are ready to go into production for the 2020 Census
- Test and validate major operational threads, procedures, systems, and infrastructure (IT and non-IT) together to ensure proper integration and conformance with functional and nonfunctional requirements
- Produce a prototype of geographic and data products

Providence County, RI



2018 End-to-End Census Test

Key Milestones

Activity	Date	
Conduct In-Office Address Canvassing	October 27, 2016 – February 2, 2017	✓
Open Regional Census Centers	January 3, 2017	✓
Begin Address Canvassing Field Staff Recruitment	March 10, 2017	✓
Open Area Census Offices	April – July 2017*	✓
Conduct In-Field Address Canvassing	August 28 – October 6, 2017	✓
Conduct Self-Response	March 16 – August 31, 2018	
Conduct Internet Self-Response, including Non-ID Processing	March 16 – July 31, 2018	
Conduct Census Questionnaire Assistance	March 16 – July 31, 2018	
Conduct Paper Data Capture	March 16 – August 31, 2018	
Census Day	April 1, 2018	
Conduct Update Leave	April 9 – May 4, 2018	
Conduct Nonresponse Followup	May 9 – July 24, 2018	
Conduct Nonresponse Followup Reinterview	May 10 – July 31, 2018	
Conduct Group Quarters Advance Contact	June 18 – July 10, 2018	
Conduct Group Quarters Enumeration	July 25 – August 24, 2018	
Publish Prototype P.L. 94-171 Data and Geographic Products	April 1, 2019	

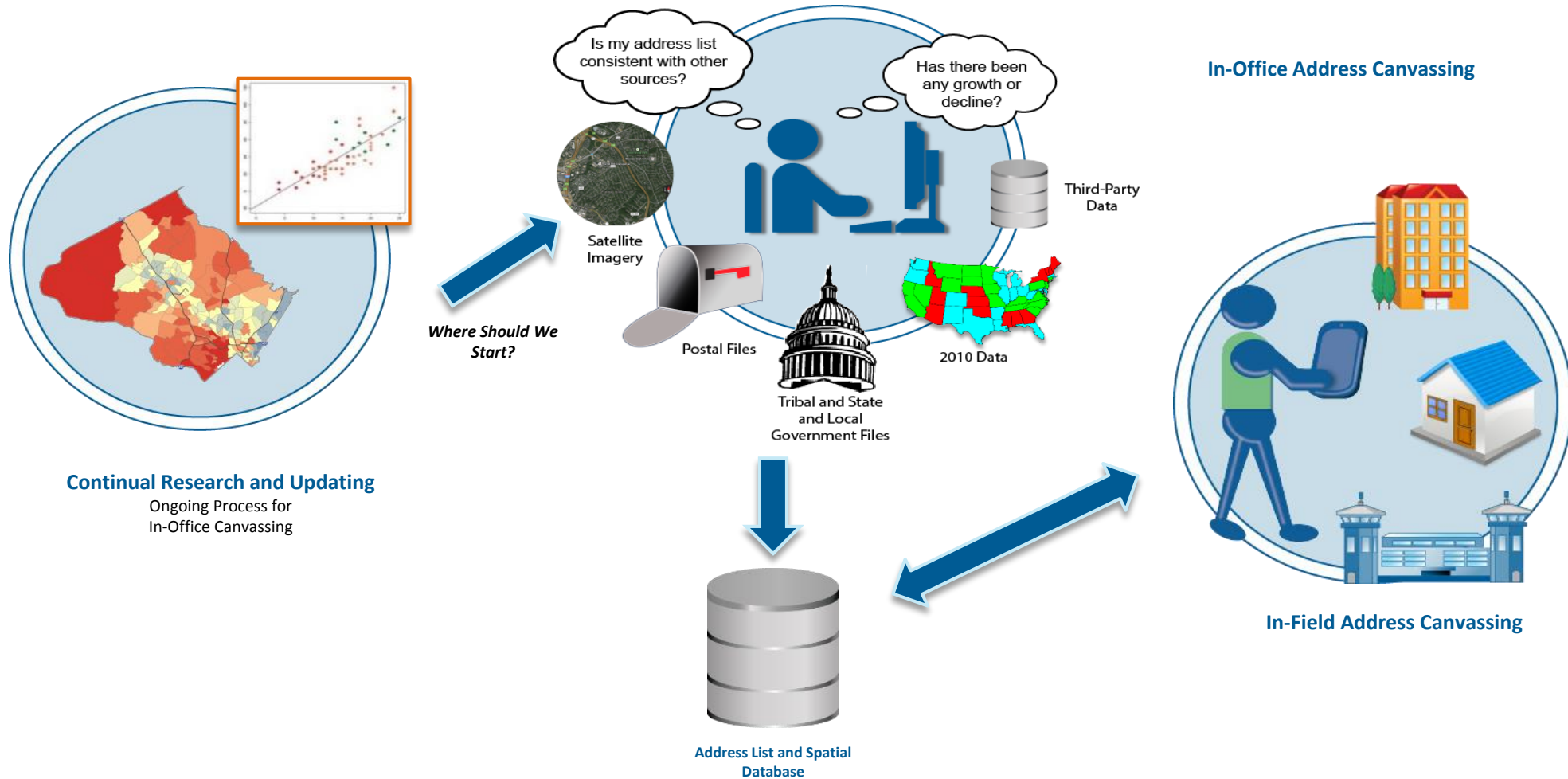
*Delayed the opening of the Area Census Offices.

2018 End-to-End Census Test

Address Canvassing

2018 End-to-End Census Test

Address Canvassing: Overview



2018 End-to-End Census Test

Address Canvassing: Overview

Objectives of the Test

- Test listing capabilities required by In-Field Address Canvassing
- Conduct Quality Control operation for In-Field Address Canvassing
- Validate the creation In-Field Address Canvassing workload by In-Office Address Canvassing operation

Methodology

- Conduct In-Field Address Canvassing in three test site locations
- Implementation of Independent Quality Control
- Workload inclusion
 - Active blocks
 - On-hold blocks (No resolution from Interactive Review)
 - Blocks resolved by Active Block Resolution (ABR currently suspended and will not be used in 2020)

Approach

- Use enhanced version of the Listing and Mapping Application (LiMA) that supports quality control operations
- Integrate with Enterprise Censuses and Surveys Enabling (ECaSE) Field Operational Control System using our Mobile Case Management (MCM) system
- ECaSE time and expense
- Use automated training solution

2018 End-to-End Census Test

Key Activities for Address Canvassing

Activity	Date	
Conduct Production Census Field Supervisor (CFS) Training	July 31, 2017	✓
Conduct Quality Control (CQ) CFS Training	August 8, 2017	✓
Conduct Production Lister Training	August 18, 2017	✓
Conduct QC Lister Training	August 25, 2017	✓
Start Production Listing	August 28, 2017	✓
Start QC Listing	September 5, 2017	✓
Conclude Production Listing	September 29, 2017	✓
Conclude QC Listing	October 6, 2017	✓

*Delayed the opening of the Area Census Offices.

2018 End-to-End Census Test

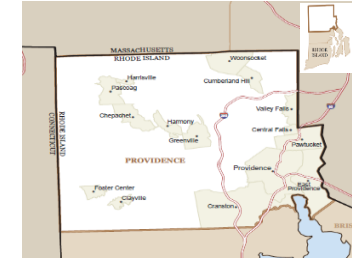
Address Canvassing: Operational Scope

Address Canvassing Operation

- Three sites: Providence County, Rhode Island; Pierce County, Washington; Bluefield-Beckley-Oak Hill, West Virginia

Operation	Workload Unit	Pierce County, WA	Providence County, RI	Bluefield-Beckley-Oak Hill, WV	Total
Total Housing Units	-	338,000	273,000	165,000	776,000
In-Field Address Canvassing	HU	~175,000	~102,000	~64,000	~341,000

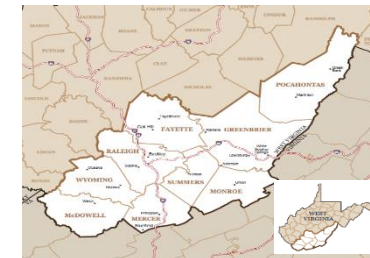
Providence County, RI



Pierce County, WA



Bluefield-Beckley-Oak Hill, WV



2018 End-to-End Census Test

Address Canvassing: Final Work Completed

Site	Block Workload	Original Addresses in Workload	Blocks Sampled into Quality Control
Bluefield-Beckley-Oak Hill, West Virginia	2,348	63,536	328
Providence County, Rhode Island	2,956	101,635	380
Pierce County, Washington	2,992	175,249	374
2018 End-to-End Census Test Total	8,296	340,420	1,082

2018 End-to-End Census Test

Successes/Lessons Learned

Successes

- Integration with Enterprise Censuses and Surveys Enabling (ECaSE) – Operational Control System
- Implementation of listing Quality Control component
- Implementation of field management alerts
- Assignment of large blocks at beginning of the operation

Lessons Learned

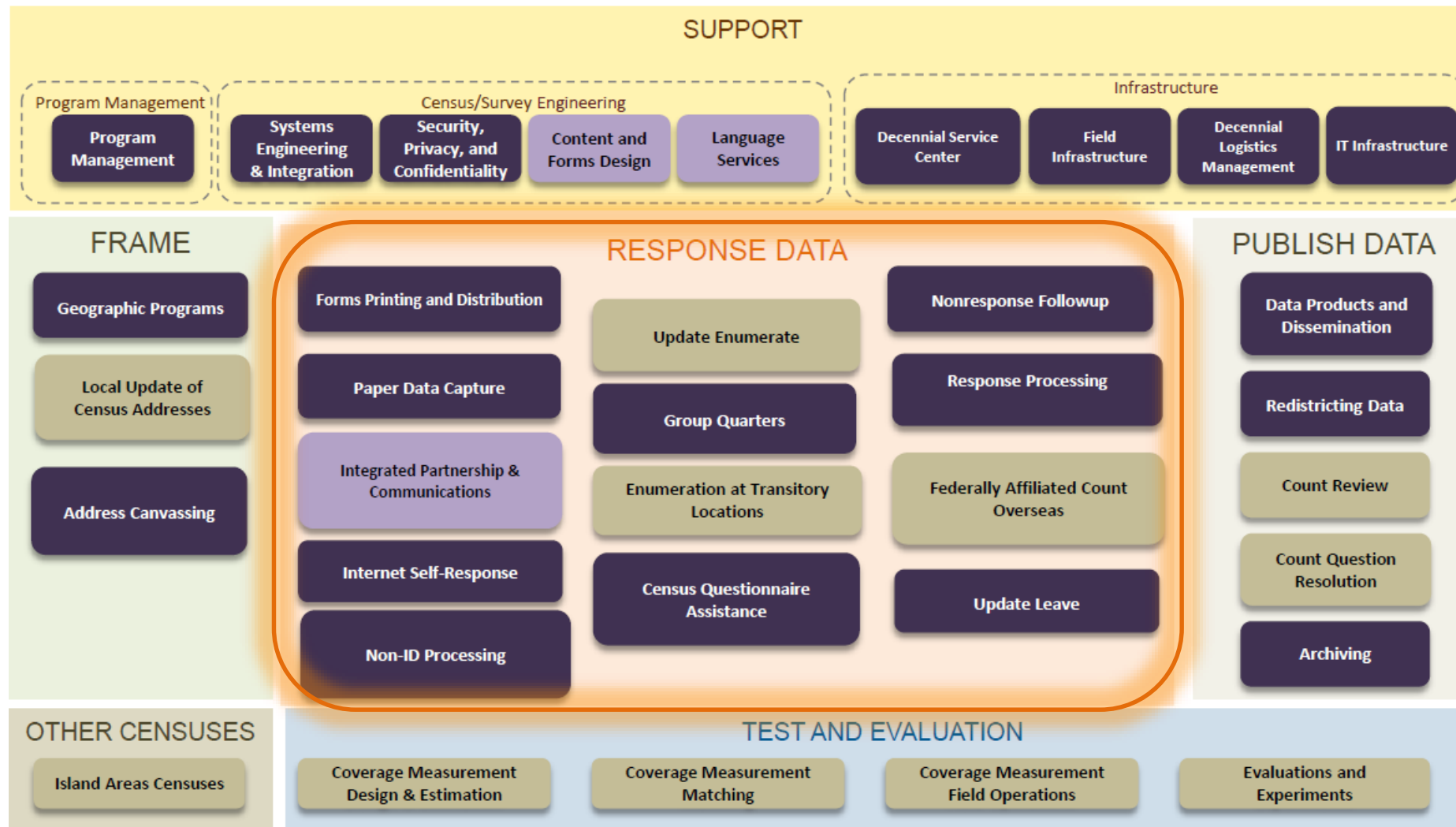
- Some aspects of technical training require improvement
- Encountered connectivity issues that will require remediation
- Revisit the business rules for optimizing assignments
- Develop operational constraints for working in a disconnected state

2018 End-to-End Census Test

Peak Operations

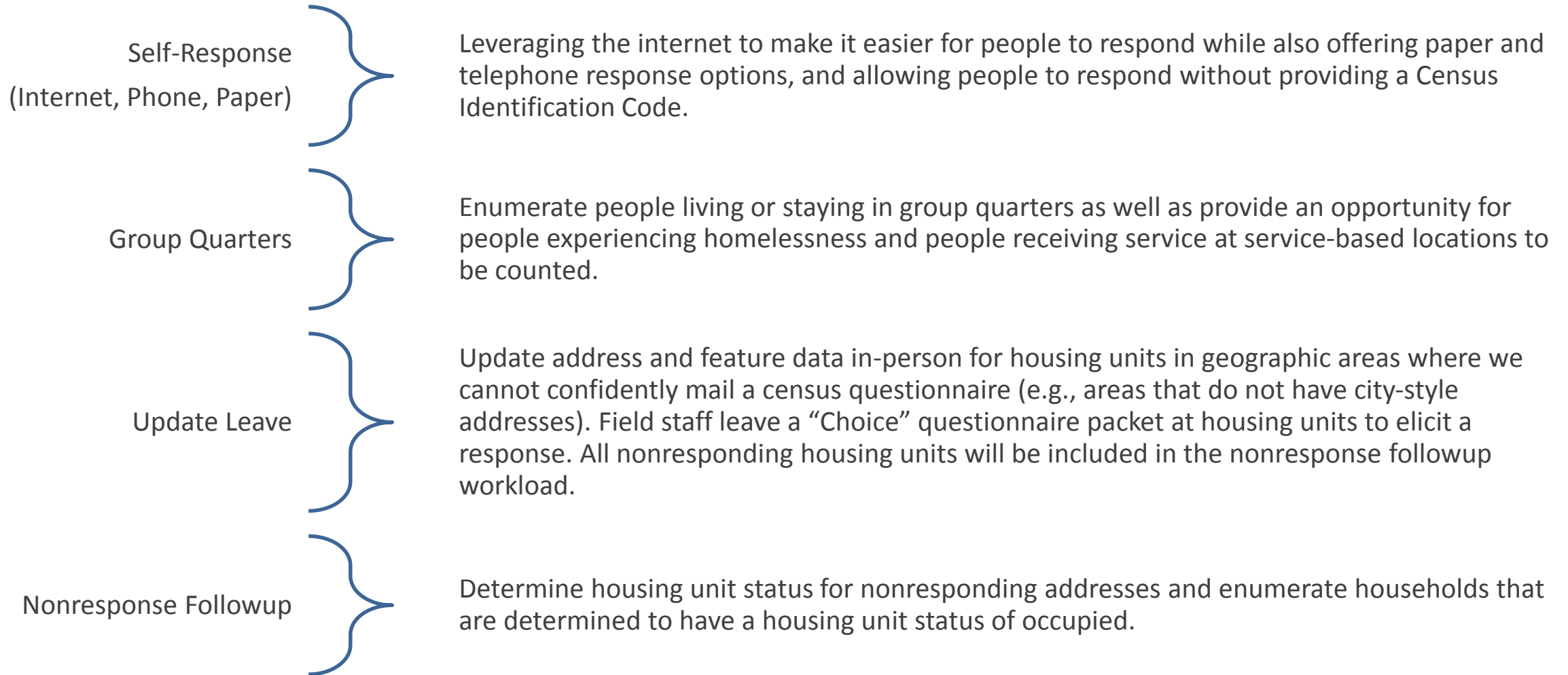
2018 End-to-End Census Test

Operational Scope



2018 End-to-End Census Test

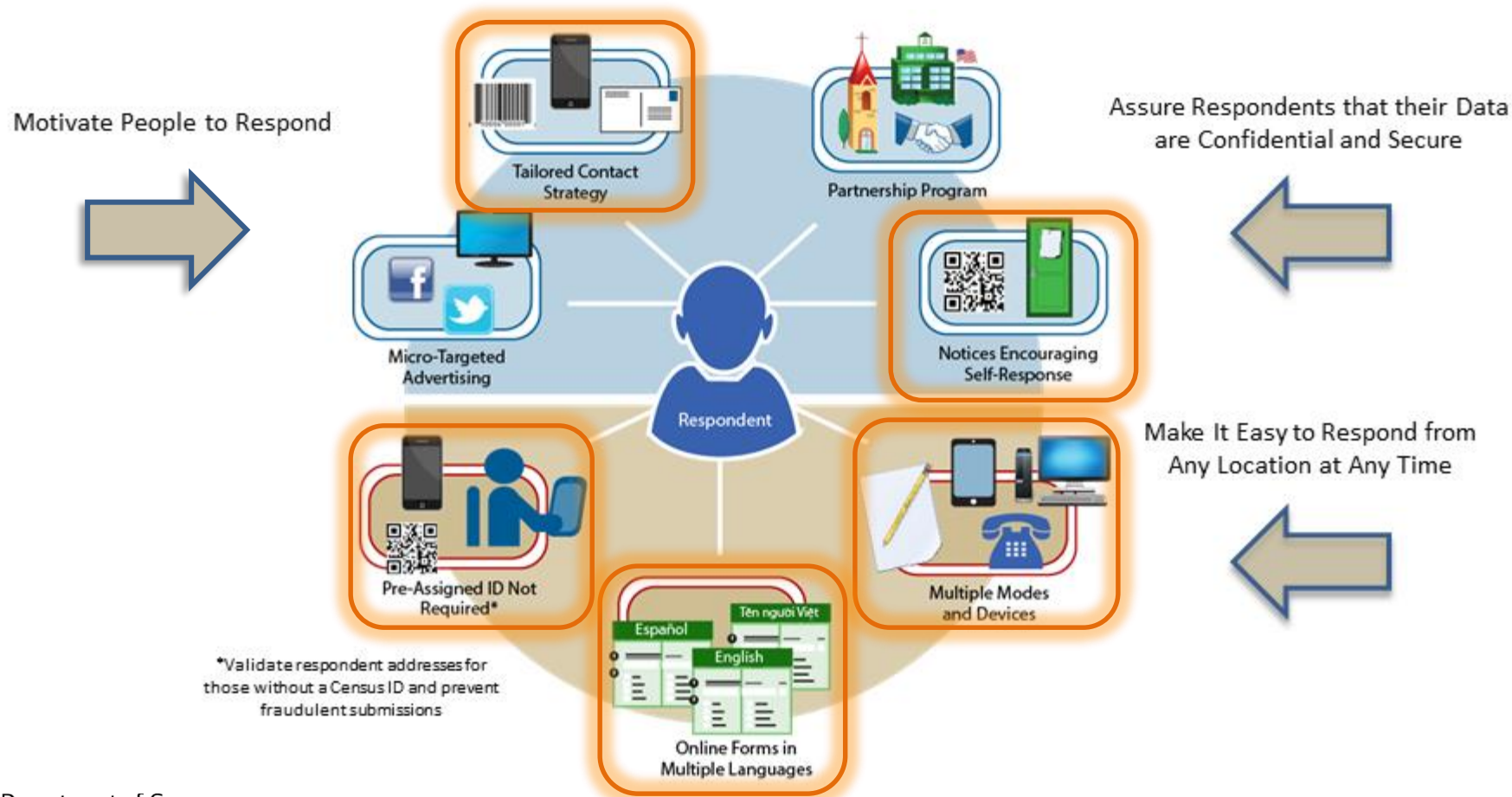
Peak Operations



The 2020 Census: Motivate People to Respond

Optimizing Self-Response

Generate the largest possible self-response, reducing the number of households requiring follow-up



2018 End-to-End Census Test

Peak Operations: Self-Response

Objectives

- Maximize online response through contact strategies and improved access for respondents
- Validate the 2020 self-response contact strategy

Methodology

- Deploy a staggered mail strategy
- Collect response data via the Internet to reduce paper and in-person visits, and maximize online response via contact strategies and improved access to respondents
- Make it easy for people to respond anytime, anywhere to increase self response rates by providing response options that do not require a unique Census-assigned User ID
- Provide questionnaire assistance for respondents by answering questions about specific items or other frequently asked questions; provide an option for callers to complete an interview over the telephone

Approach

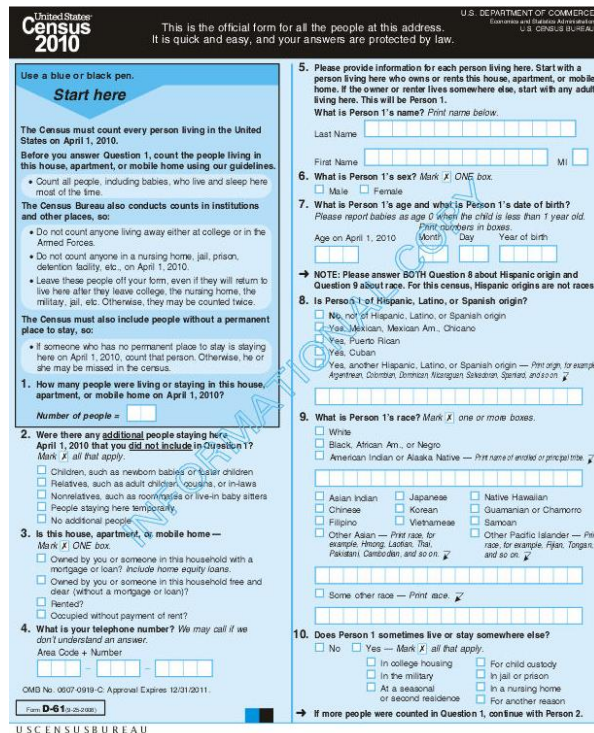
- Integrates Enterprise Censuses and Surveys Enabling (ECaSE) Internet Self-Response (ISR) application and the Census Questionnaire Assistance Solution
- Uses ECaSE Survey Operational Control System to control and manage workload
- Implements Real-Time Non-ID processing

2018 End-to-End Census Test

Optimizing Self-Response

The 2010 Census

Only paper questionnaires



This is the official form for all the people at this address. It is quick and easy, and your answers are protected by law.

Start here

Use a blue or black pen.

The Census must count every person living in the United States on April 1, 2010.

Before you answer Question 1, count the people living in this house, apartment, or mobile home using our guidelines.

- Count all people, including babies, who live and sleep here most of the time.
- The Census Bureau also conducts counts in institutions and other places, too.
- Do not count anyone living away either at college or in the Armed Forces.
- Do not count anyone in a nursing home, jail, prison, detention facility, etc., on April 1, 2010.
- Leave these people off your form, even if they will return to live here after they leave college, the nursing home, the military, jail, etc. Otherwise, they may be counted twice.

The Census must also include people without a permanent place to stay, too.

- If someone who has no permanent place to stay is staying here on April 1, 2010, count that person. Otherwise, he or she may be missed in the census.

1. How many people were living or staying in this house, apartment, or mobile home on April 1, 2010?

Number of people =

2. Were there any additional people staying here April 1, 2010 that you did not include in Question 1? Mark X, all that apply.

☐ Children, such as newborn babies or foster children

☐ Relatives, such as adult children, cousins, or in-laws

☐ Nonrelatives, such as roommates or live-in baby sitters

☐ People staying here temporarily

☐ No additional people

3. Is this house, apartment, or mobile home —

Mark X ONE box.

☐ Owned by you or someone in this household with a mortgage or loan? Include home equity loans.

☐ Owned by you or someone in this household free and clear (without a mortgage or loan)?

☐ Rented?

☐ Occupied without payment of rent?

4. What is your telephone number? We may call if we don't understand an answer.

Area Code + Number

- - - - -

OMB No. 0607-0199-C Approval Expires 12/31/2011.

Form **D-51a-S-2100**

U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

5. Please provide information for each person living here. Start with a person living here who owns or rents this house, apartment, or mobile home. If the owner or renter lives somewhere else, start with any adult living here. This will be Person 1.

What is Person 1's name? Print name below:

Last Name First Name MI

6. What is Person 1's sex? Mark X ONE box.

☐ Male ☐ Female

7. What is Person 1's age and what is Person 1's date of birth? Please report babies as age 0 when the child is less than 1 year old.

Age on April 1, 2010 (Month) Day Year of birth

→ NOTE: Please answer BOTH Question 8 about Hispanic origin and Question 9 about race. For this census, Hispanic origins are not races.

8. Is Person 1 of Hispanic, Latino, or Spanish origin?

☐ No, not of Hispanic, Latino, or Spanish origin

☐ Yes, Mexican, Mexican Am., Chicano

☐ Yes, Puerto Rican

☐ Yes, Cuban

☐ Yes, another Hispanic, Latino, or Spanish origin — Print origin, for example, Argentine, Colombian, Dominican, Salvadoran, etc., and so on.

9. What is Person 1's race? Mark X one or more boxes.

☐ White

☐ Black, African Am., or Negro

☐ American Indian or Alaska Native — Print name of enrolled or principal tribe.

☐ Asian Indian

☐ Japanese

☐ Native Hawaiian

☐ Chinese

☐ Korean

☐ Guamanian or Chamorro

☐ Filipino

☐ Vietnamese

☐ Samoan

☐ Other Asian — Print race, for example, Hmong, Laotian, Thai, Pakistani, Cambodian, and so on.

☐ Other Pacific Islander — Print race, for example, Fijian, Tongan, and so on.

☐ Some other race — Print race.

10. Does Person 1 sometimes live or stay somewhere else?

☐ No

☐ Yes — Mark X all that apply.

☐ In college housing

☐ In the military

☐ At a seasonal or second residence

☐ For child custody

☐ In jail or prison

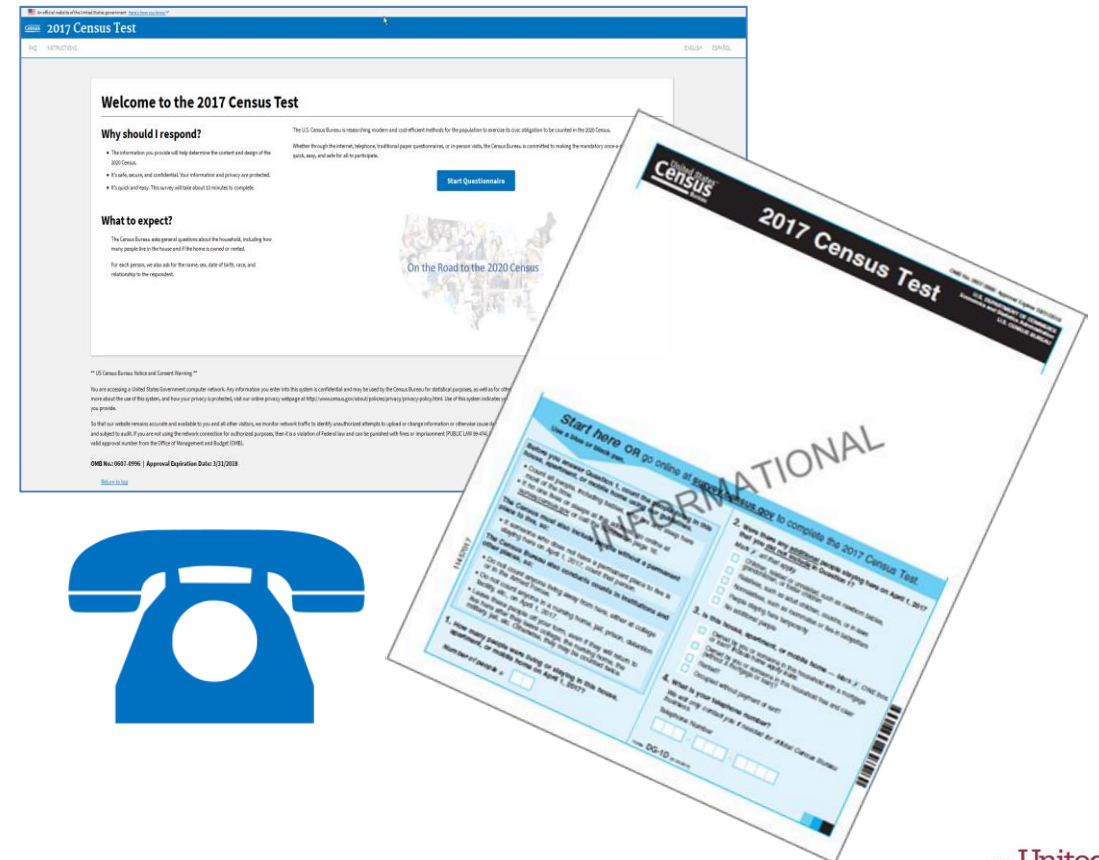
☐ In a nursing home

☐ For another reason

→ If more people were counted in Question 1, continue with Person 2.

The 2020 Census

Internet, phone, and paper response options



2017 Census Test

Welcome to the 2017 Census Test

Why should I respond?

- The information you provide will help determine the content and design of the 2020 census.
- It's quick, secure, and confidential. Your information and privacy are protected.
- It's quick and easy. This survey will take about 10 minutes to complete.

What to expect?

The Census Bureau will send you questions about the household, including how many people live in the house and if the house is owned or rented.

For each person, we also ask for the name, sex, date of birth, race, and relationship to the respondent.

Start Questionnaire

On the Road to the 2020 Census

2017 Census Test

Start here or go online at census.gov to complete the 2017 Census Test.

Before you answer Question 1, count the people living in this house, apartment, or mobile home using our guidelines.

Count all people, including babies, who live and sleep here most of the time.

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Do not count anyone living away either at college or in the Armed Forces.

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Area Code + Number

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Form **D-51a-S-2100**

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2018 End-to-End Census Test

Self-Response Mail Strategy

Self-Response

- Self-response contact strategy: two-panel design
- ~ 271,000 housing units in sample
 - ~ 184,000 (67.9 percent) Internet First (invitation letter on first contact)
 - ~ 87,000 (32.1 percent) Internet Choice (questionnaire on first contact)

March							April						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	①	2	3	4	5	6	7
4	5	6	7	8	9	10	8	9	10	11	12	13	14
11	12	13	14	15	16	17	15	16	17	18	19	20	21
18	19	20	21	22	23	24	22	23	24	25	26	27	28
25	26	27	28	29	30	31	29	30					

Panel	Cohort	Mailing 1 <i>Letter (Internet First) or Letter + Questionnaire (Internet Choice)</i>	Mailing 2 <i>Letter</i>	Mailing 3* <i>Postcard</i>	Mailing 4* <i>Letter + Questionnaire</i>	Mailing 5* <i>"It's not too late" Postcard</i>
Internet First	1	March 16, 2018	March 20, 2018	March 30, 2018	April 12, 2018	April 23, 2018
	2	March 20, 2018	March 23, 2018	April 3, 2018	April 16, 2018	April 26, 2018
	3	March 23, 2018	March 27, 2018	April 6, 2018	April 19, 2018	April 30, 2018
Internet Choice	N/A	March 16, 2018	March 20, 2018	March 30, 2018	April 12, 2018	April 23, 2018

(*) Targeted only to nonrespondents

2018 End-to-End Census Test

Peak Operations: Nonresponse Followup

Objectives

- Use administrative records to inform and reduce the Nonresponse Followup (NRFU) workload
- Evaluate refined field operations, including a reengineered field staffing structure and a reengineered operational control system that optimizes case assignments and routing
- Measure the efficiency and effectiveness of the field staff structure and workload
- Evaluate the cost of the operation and quality of the response data obtained

Methodology

- Use of administrative records and third-party data to determine occupancy status and set contact strategies for nonresponding housing units
- Use of an automated and integrated case assignment, case management, and data collection
 - Replacing paper-based operations to provide a faster, more accurate, and more secure means of data collection








Approach

- Use Enterprise Censuses and Surveys Enabling (ECaSE) Enumeration Application to support both production and quality control components
- Integrate with ECaSE Field Operational Control System using our Mobile Case Management (MCM) system
- ECaSE Time and Expense
- Use Automated Training Solution

2018 End-to-End Census Test

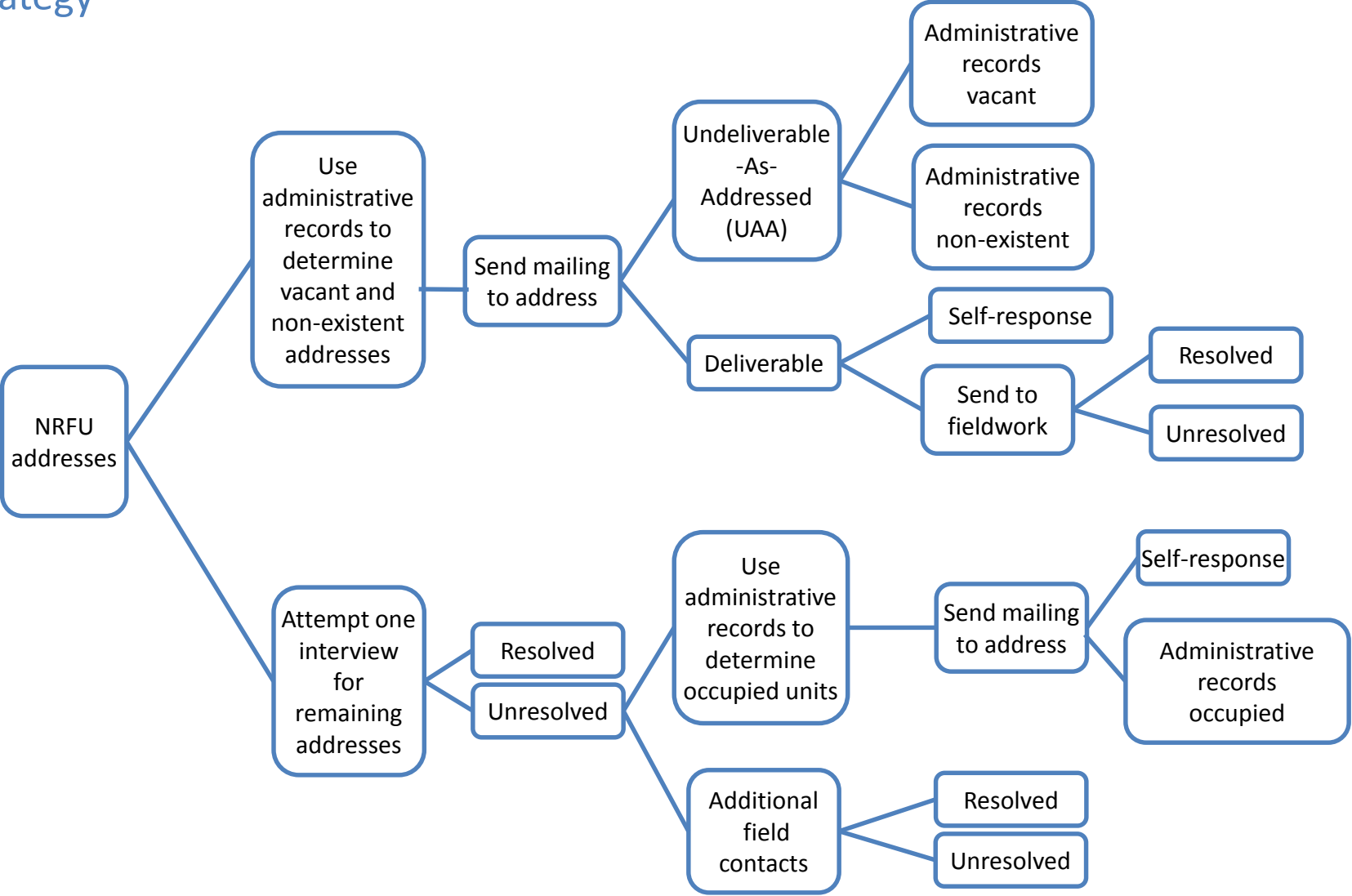
Utilizing Administrative Records and Third-Party Data

Use information people have already provided to reduce expensive in-person follow-up

Improve the Quality of the Address List	 Update the address list	 Validate incoming data from federal, tribal, state, and local governments
Increase Effectiveness of Advertising and Contact Strategies	 Support the micro-targeted advertising campaign	 Create the contact frame (e.g., email addresses and telephone numbers)
Validate Respondent Submissions	 Validate respondent addresses for those without a Census ID and prevent fraudulent submissions	
Reduce Field Workload for Followup Activities	 Remove vacant and nonresponding occupied housing units from the nonresponse followup workload	 Optimize the number of contact attempts

2018 End-to-End Census Test

Contact Strategy

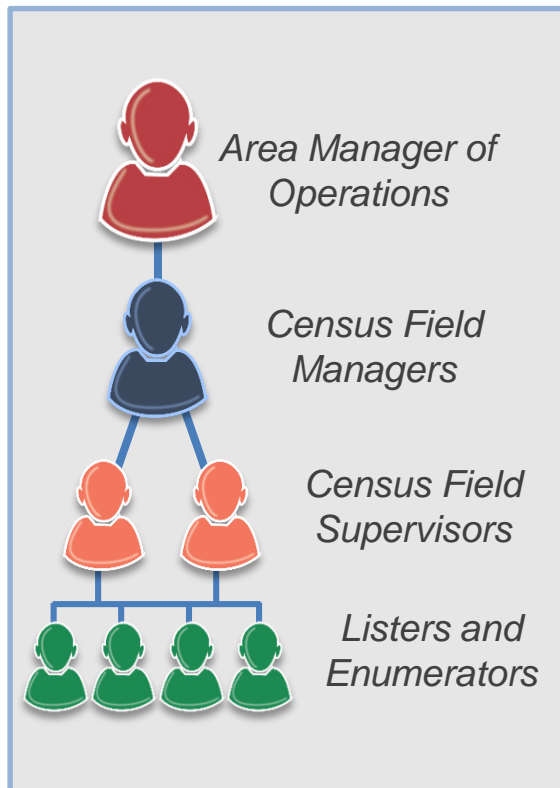


2018 End-to-End Census Test

Reengineering Field Operations

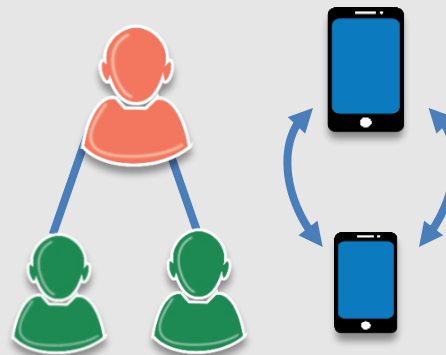
Use technology to more efficiently and effectively manage the 2020 Census fieldwork

Streamlined Office and Staffing Structure



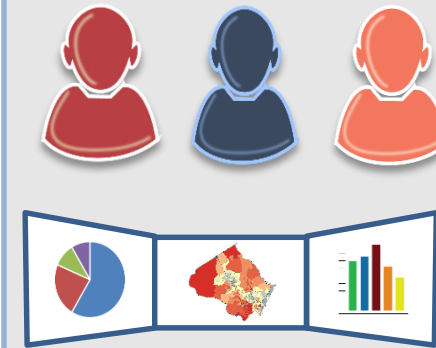
Increased use of Technology

- Automated and optimized work assignments
- Automated recruiting, training, payroll and expense reporting
- Reduced paper and manual processing



Increased Management and Staff Productivity

- Increased visibility into case status for improved workforce management
- Redesigned quality assurance operations
- Improved communications



2018 End-to-End Census Test

Reengineering Field Operations

The 2010 Census

- Printed paper register listing each enumerator's caseload along with paper maps

This report is generated once daily

This report contains Personally Identifiable Information (PII), the release of which is protected by the Privacy Act of 1974

D-948A (NRFU)

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CASE STATUS REPORT BY ENUMERATOR
OPERATION: NONRESPONSE FOLLOWUP
2010 CENSUS

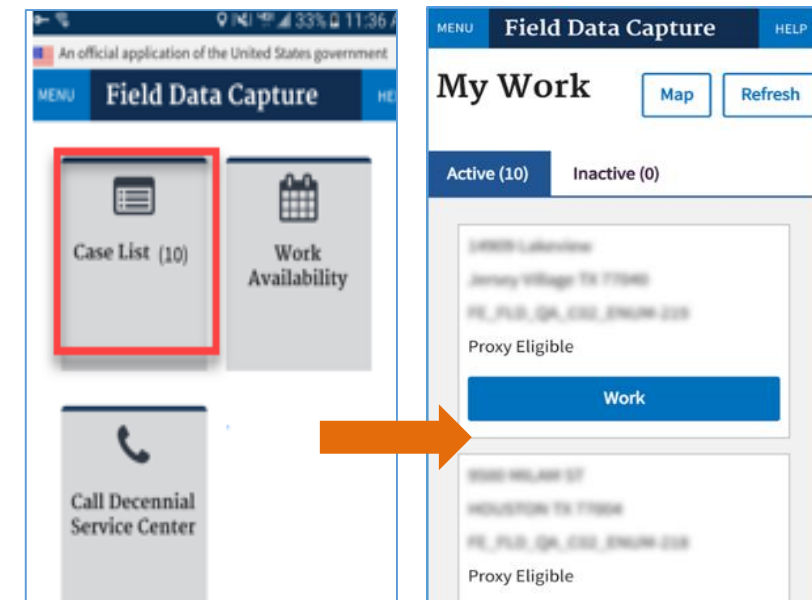
RCC: 10000 Metropolis
LCO: 10200 Centerville
FOSD: 01
CLD: 0000

Create Date/Time 5/12/2010 5:30 am
Print Date/Time 5/12/2010 10:30 am

Employee Name	Applicant ID	# Total Cases Assigned	# HU Adds	# Cases CHKD In	% Cases CHKD In	Outstanding World	# Cases POP = 1	% Cases POP = 1	# Non Interview	% Non Interview	# Close Out	% Close Out	# VAC	% VAC	# DEL	% DEL	# Proxy Cases	% Proxy Cases
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Enum01		60		25	41.66	35	4	16%	2	8%								
Enum1,1		51		20	39.21	31												
Enum2,1		41		30	73.17	11	2	7%										
Enum4,1		70	3	39	55.71	34	3	8%	2	5%							3	
Enum5,1		56		29	51.78	27			5	17%			1	3%			3	1
Enum7,1		76	1	64	84.21	13	5	8%			1	2%			1	2%		2
Enum6,1		62		54	87.01	8			1	2%	3	6%			3	6%		6
Enum8,1		69		51	73.91	18	3	6%					2	4%	3	6%	2	5
Enum9,1		70		52	74.28	18							3	5%	1	2%	1	4
Enum10,1		65	2	57	87.69	10	1	2%							1	3%	3	1
Enum3,1		68		32	47.05	36			3	9%								
Enum12,1		55		46	83.64	9	5	11%			1	2%					1	1
Enum13,1		70		43	61.43	27					3	7%			3	7%		
Enum14,1		66		35	53.03	31	5	14%			1	3%	3	9%				4
Enum15,1		70		26	37.14	44	3	12%			2	8%	2	8%	1	4%		5
CLD Totals		949	6	603	63.54%	352	31	5%	17	3%	11	2%	11	2%	13	2%	16	29

The 2020 Census

- Operational Control System
 - Delivers optimized routing
 - Sends alerts to focus managers on areas needing review
- Allows managers to oversee more enumerators than in 2010



2018 End-to-End Census Test

Reengineering Field Operations

The 2010 Census

- Paper payroll
- Timesheet submission required daily in-person meeting with supervisor

Form D-308, DAILY PAY AND WORK RECORD, 2010 CENSUS

Part A - EMPLOYEE INFORMATION

First Name: _____ Last Name: _____ Employee ID: _____

Month: _____ Day: _____ Year: _____

1. Date worked - Mark (X)

Sun. Mon. Tue. Wed. Thu. Fri. Sat. **IF RECLAIM - Mark (X)**

2. Task code _____ **Operation name** _____ **Remarks** _____

3. Office code _____ **Office name** _____

4. Points of travel

From: _____ To: _____ From: _____ To: _____

Part B - PAY INFORMATION

1. Hours worked

Regular _____ Training _____ Night Differential (8 pm-6 am) _____ Overtime _____ Night Differential Overtime (8 pm-6 am) _____ Total _____

2. Times of day worked - Do not include breaks.

START (Mon-Fri) **FINISH** (Mon-Fri)

3. Have you claimed ALL hours worked? If not - Please list number of hours, date(s) hours were worked, and an explanation of why you are not claiming them for payment.

4. Reimbursements

Mile driven _____ Telephone _____ Other - Specify in Remarks and attach receipts where required _____

FOR OFFICE USE ONLY

Part C - CERTIFICATION

Privacy Act Notice - All information furnished will be treated in accordance with the Privacy Act of 1974. No information will be released except as authorized by the Act.

Employee's Certification - Under penalty of this and/or imprisonment, I certify that the information on this form is true and correct to the best of my knowledge.

Supervisor's Certification - I certify that I have reviewed the entries made and they appear to be reasonable and accurate.

Signature: _____ Date: _____ Signature: _____ Date: _____

FOR OFFICE USE ONLY

Audited by (date and date) _____ Remarks: _____

Copy distribution: ORIGINAL - Payroll COPY - Employee

U.S. CENSUS BUREAU

The 2020 Census

- Electronic payroll
- Timesheet submitted and approved electronically

Training FDC

Home

Current Week's Time

	Sun 07/16/17	Mon 07/17/17	Tue 07/18/17	Wed 07/19/17	Thu 07/20/17	Fri 07/21/17	Sat 07/22/17
Precache Maps	A: 0	A: 0	A: 0	A: 0	A: 0	A: 0	A: 0
Work Availability	U: 0	U: 0	U: 0	U: 0	U: 0	U: 0	U: 0
Call Decennial Service Center	Weekly Total						
Reference Materials	A: 0						
Log off	U: 0						

RECENT

Time and Expense
EC_FE_TRN_Stage_C01TE-999

Add Time And Expense

2018 End-to-End Census Test

Reengineering Field Operations

The 2010 Census

- Enumerators used paper questionnaires
- Labor intensive procedures used to control movement of questionnaires

The 2020 Census

- Automated process
- Enumerators will have a handheld device

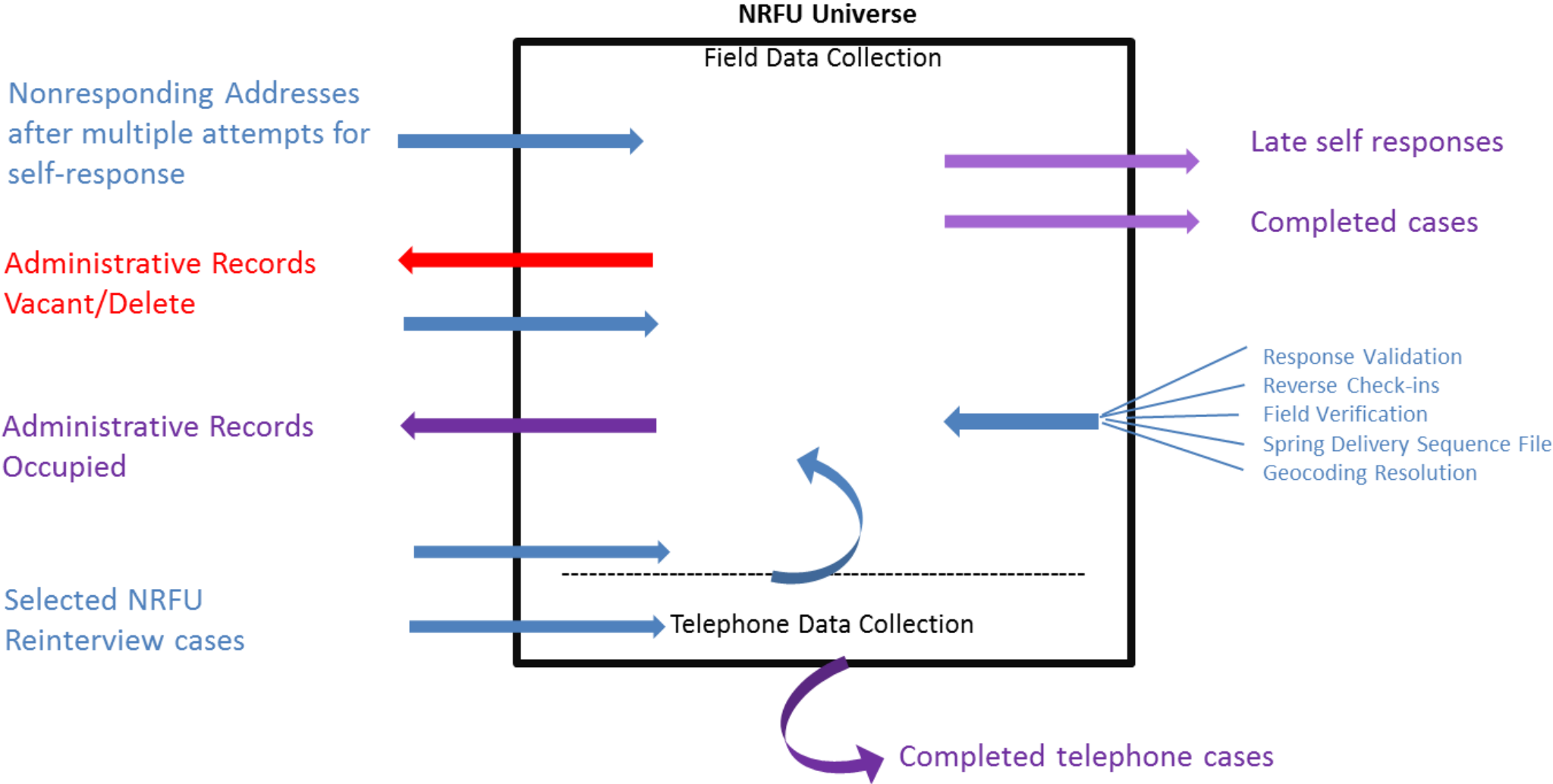
2018 End-to-End Census Test

Key Activities for Nonresponse Followup

Activity	Date	
Begin Recruiting for Nonresponse Followup (NRFU)	September 5, 2017	✓
Conduct Census Field Manager (CFM) Training	March 26, 2018	
Census Day	April 1, 2018	
Conduct Census Field Supervisor (CFS) Training	April 10, 2018 – April 18, 2018	
Conduct Enumerator Training	April 28, 2018 – May 10, 2018	
Start NRFU Enumeration	May 9, 2018	
Start NRFU Reinterview	May 10, 2018	
Conclude NRFU Enumeration	July 24, 2018	
Conclude NRFU Reinterview	July 31, 2018	

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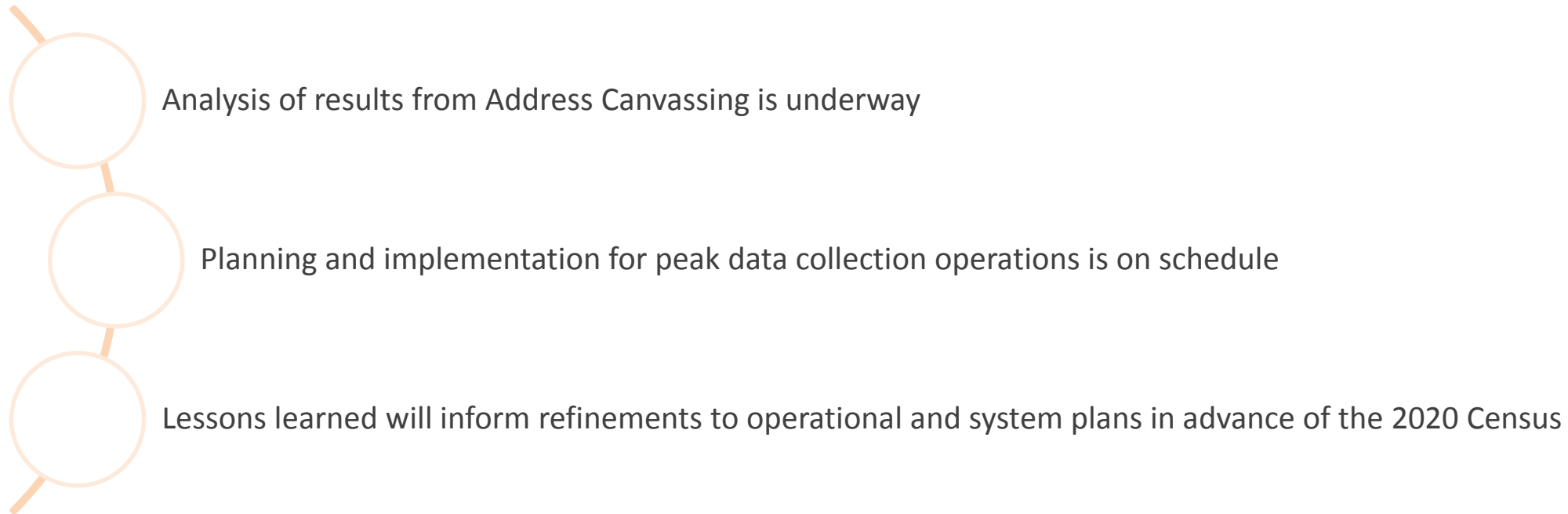
Nonresponse Followup Estimated Workload



* Addresses not previously in the enumeration universe.

2018 End-to-End Census Test

Summary



Questions?